(Chel)γAbuNleDHF$_d$ RWK-NH_2, (SEQ ID NO:1)

(Chel)γAbuHSDAVFTDNYTRLRKQMAVKKYLNSILN-NH_2, (SEQ ID NO:2)

KPRRPYTDNYTRLRK(Chel)QMAVKKYLNSILN-NH_2, (SEQ ID NO:3)

(Chel)γAbuVFTDNYTRLRKQMAVKKYLNSILN-NH_2,

(Chel)γAbuYTRLRKQMAVKKYLNSILN-NH_2, (SEQ ID NO:4)

HSDAVFTDNYTRLRK(Chel)QMAVKKYLNSILN-NH_2, (SEQ ID NO:5)

(SEQ ID NO:6) <GHWSYK(Chel)LRPG-NH_2, <GHYSLK(Chel)WKPG-NH_2, (SEQ ID NO:7)

AcNal$_d$ Cpa$_d$ W$_d$ SRK$_d$ (Chel)LRPA$_d$ -NH_2, (SEQ ID NO:8)

(SEQ ID NO:9) (Chel)γAbuSYSNleDHF$_d$ RWK-NH_2, Ac-HSDAVFTENYTKLRK(Chel)QNleAAKKYLNDLKKGGT-NH_2, (SEQ ID NO:10)

(SEQ ID NO:12) Nal$_d$ Cpa$_d$ W$_d$ SRK$_d$ (Chel)WKPG-NH_2, <GHWSYK$_d$ (Chel)LRPG-NH_2, (SEQ ID NO:13)

(SEQ ID NO:14) AcK(Chel)F$_d$ CFW$_d$ KTCT-OH, AcK(Chel)DF$_d$ CFW$_d$ KTCT-OH, (SEQ ID NO:15)

(SEQ ID NO:14) AcK(Chel)F$_d$ CFW$_d$ KTCT-ol, AcK(Chel)DF$_d$ CFW$_d$ KTCT-ol, (SEQ ID NO:15)

(SEQ ID NO:16) (Chel)DF$_d$ CFW$_d$ KTCT-OH, K(Chel)DF$_d$ CFW$_d$ KTCT-ol, (SEQ ID NO:15)

(SEQ ID NO:17) K(Chel)KKF$_d$ CFW$_d$ KTCT-ol, K(Chel)KDF$_d$ CFW$_d$ KTCT-OH, (SEQ ID NO:18)

(SEQ ID NO:19) K(Chel)DSF$_d$ CFW$_d$ KTCT-OH, K(Chel)DF$_d$ CFW$_d$ KTCT-OH, (SEQ ID NO:15)

(SEQ ID NO:20) K(Chel)DF$_d$ CFW$_d$ KTCD-NH_2, K(Chel)DF$_d$ CFW$_d$ KTCT-NH_2, (SEQ ID NO:15)

(SEQ ID NO:18) K(Chel)KDF$_d$ CFW$_d$ KTCT-$NHNH_2$, AcK(Chel)F$_d$ CFW$_d$ KTCT-$NHNH_2$, (SEQ ID NO:14)

(SEQ ID NO:14) K(Chel)F$_d$ CFW$_d$ KTCT-ol, and F$_d$ CFW$_d$ KTCTK(Chel)-NH_2, (SEQ ID NO:21)

wherein (Chel) is a radiometal-binding moiety having the structure set forth above.